

WHAT IS CLAIMED IS:

1. An injection molding apparatus, comprising:
 - at least a pair of dies provided to be openable and closable for forming a plurality of cavities therebetween
 - 5 when said pair of dies are closed;
 - die closing means for closing said pair of dies under a prescribed pressure;
 - injection means for injecting a molten resin under a prescribed pressure into said plurality of cavities
 - 10 formed between said pair of dies when said dies are closed; and
 - control means for controlling said die closing means and said injection means, said apparatus further comprising:
 - 15 a plurality of pressure detection means for detecting a pressure in each of said plurality of cavities, wherein:
 - said control means controls said injection means and said die closing means in accordance with a detected
 - 20 value from said plurality of pressure detection means.
 - 2. The injection molding apparatus according to claim 1, wherein when a pressure difference among said plurality of cavities is found to be greater than a
 - 25 prescribed value, said control means controls a rate of injection of the molten resin and/or a die closing force to be reduced, in accordance with the detected values from said plurality of pressure detection means.
 - 30 3. The injection molding apparatus according to claim 1, wherein when a pressure difference among said

plurality of cavities is found to be greater than a prescribed value, said control means stops the injection of the molten resin and/or application of a die closing force, in accordance with the detected values from said
5 plurality of pressure detection means.

4. The injection molding apparatus according to any one of claims 1, 2 and 3, wherein said control means carries out its control in accordance with a program
10 which presets injection conditions at a first molding instance in an injection molding operation.

5. The injection molding apparatus according to any one of claims 1, 2 and 3, wherein said control means
15 controls so that a quantity of injection of the molten resin in a first molding instance in its injection molding operation becomes $1/n$ or less compared with a quantity of injection thereof in a second and subsequent molding instances, provided that there exist n cavities.

20 6. An injection molding apparatus, comprising
at least a pair of dies provided to be openable and closable for forming a plurality of cavities therebetween when said pair of dies are closed;

25 die closing means for closing said pair of dies under a prescribed pressure;

injection means for injecting a molten resin under a prescribed pressure into said plurality of cavities formed between said pair of dies which said dies are
30 closed; and

control means for controlling said die closing

means and said injection means, wherein:

said control means carries out its control in accordance with a program, which presets injection conditions that are effective only for a first molding
5 instance in an injection molding operation.

7. The injection molding apparatus according to claim 6, wherein said control means controls so that a quantity of injection of the molten resin at a first molding
10 instance in an injection molding operation becomes $1/n$ or less compared with a quantity of injection thereof at a second and subsequent molding instances, provided that there exist n cavities.

15 8. An injection molding method utilizing an injection molding apparatus having at least a pair of dies provided to be openable and closable for forming a plurality of cavities therebetween when said pair of dies are closed, into which a molten resin is injected, said method
20 comprising the steps of:

detecting a pressure in each of said plurality of cavities, respectively; and

if a pressure difference between said plurality of cavities exceeds a predetermined value, reducing a rate
25 of injection of the molten resin and/or a die closing force.

9. An injection molding method utilizing an injection molding apparatus having at least a pair of dies provided
30 to be openable and closable for forming a plurality of cavities therebetween when said pair of dies are closed,

into which a molten resin is injected, said method comprising the steps of:

detecting a pressure in each of said plurality of cavities, respectively; and

- 5 if a pressure difference between said plurality of cavities exceeds a predetermined value, stopping injection of the molten resin and/or application of a die closing force.